

## Case Study - Pilsners

Designing  
Great  
Beers - Ray  
Daniels

Originated in city of Pilsen - Czech Republic

- First Key Tapped - Nov. 11th 1842

### The Story Goes

Until the first Pilsner Uguell, All Czech beers were common, not relatively satisfying ales. To their credit, those beers were made of the finest 2-row barley and contained the royal Zatek-Red hops. The kind known as "Saaz" today. In fact, these hops were so precious that the king of the land had ruled anyone caught smuggling hop rhizomes (Hop seeds) out of the country would be punished with death. Despite the quality of their raw ingredients one key component was missing - yeast. Not any old yeast though, the yeast that created the famous beer we know today was introduced by a travelling monk.

### Characteristics

Grain bill - 100% Pilsen 2-Row

Hops - 100% Saaz (Zatek Red)

Water - 1.49 parts minerals per 10,000 parts water

Fermentation - 3 yeasts (unnamed)

Primary - 7-10°C

Secondary - 0-2°C

# Brewing scheme

## Mashing

mix cold water with grain, raise to  $35^{\circ}\text{C}$

### 1st Decoction

- Pull portion of mash, add boiling water to it to achieve -  $53^{\circ}\text{C}$
- Heat to  $63^{\circ}\text{C}$  in 13 min
- Heat to  $75^{\circ}\text{C}$  in 20 min
- Hold for:  
8 min
- Heat to Boil in 12 min
- Boil for:  
30 min
- Return enough to elevate mash to  $43^{\circ}\text{C}$

### 2nd Decoction

- Pull portion of mash, add boiling water to it to achieve -  $63^{\circ}\text{C}$
- Heat to  $75^{\circ}\text{C}$  in 20 min
- Rest for:  
8 min
- Heat to Boil in 12 min
- Boil for:  
15 min
- Return enough to elevate mash to  $63^{\circ}\text{C}$

### 3rd Decoction

- Pull portion, add B.W.  $\rightarrow 88^{\circ}\text{C}$
- Heat to Boil in 12 min
- Boil for:  
10 min
- Return all to Mash Tun.

HOPPING - 400 g/Hedoliter  $\rightarrow$  4 Hour Boil.

- $\frac{1}{3}$  ☉ beginning
- $\frac{1}{3}$  ☉ half way
- $\frac{1}{3}$  ☉ 30 min till end